### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-013081 Address: 333 Burma Road **Date Inspected:** 26-Mar-2010

City: Oakland, CA 94607

**OSM Arrival Time: Project Name:** SAS Superstructure **OSM Departure Time: Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** N/A **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Weld Procedures Followed:** N/A **Electrode to specification:** No Yes No N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS: Delayed / Cancelled:** Yes No N/A

34-0006 **Bridge No: Component:** Orthotropic Box Girder (OBG)

## **Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

#### HEAVY DOCK

LIFT:6 East/West and Crossbeam(CB)-CB6.

This Quality Assurance (QA) Inspector witnessed final tension verification for the Bottom Panel (BP) "T"Rib to "T"Rib splice joints, Side panel(SP) "T"Rib to "T"Rib splice joints, Longitudinal diaphragm(LD) to Longitudinal diaphragm splice joints and Cat walk supports at LIFT:5 6 East/West and CB6. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the ZPMC submitted Notification No. 00305 Dated: March 26, 2010.

Details of Segment, bolt size, RC Set # and final torque value are as follows:

SEGMENT: 6AW-6BW-Panel Point (PP) #40-41(BP to BP and SP to SP Transverse splice joints).

Bolt sizes used were M22X65, RC Set# DHGM220035 and final torque value was 433 N-m.

Bolt sizes used were M22X70, RC Set# DHGM220017 and final torque value was 487 N-m.

# WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Manual Torque wrench was been used with Sr. No. XO2-596.

SEGMENT: 6BW-6CW-Panel Point (PP) #43-44(BP to BP and SP to SP Transverse splice joints).

Bolt sizes used were M22X65, RC Set# DHGM220035 and final torque value was 433 N-m.

Bolt sizes used were M22X70, RC Set# DHGM220017 and final torque value was 487 N-m.

Manual Torque wrench was been used with Sr. No. XO2-596.

LD to LD - Transverse splice joint.

Bolt sizes used were M24X70, RC Set# DHGM240010 and final torque value was 560 N-m.

Bolt sizes used were M24X95, RC Set# DHGM240021 and final torque value was 540 N-m.

Manual Torque wrench was been used with Sr. No. XO2-596.

SEGMENT: 6AE-6BE-Panel Point (PP) #40-41(LD to LD - Transverse splice joint).

Bolt sizes used were M24X70, RC Set# DHGM240003 and final torque value was 543 N-m.

Bolt sizes used were M24X95, RC Set# DHGM240021 and final torque value was 540 N-m.

Manual Torque wrench was been used with Sr. No. XO2-578.

SEGMENT: 6BE-6CE-Panel Point (PP) #43-44(LD to LD - Transverse splice joint).

Bolt sizes used were M24X70, RC Set# DHGM240003 and final torque value was 543 N-m.

Bolt sizes used were M24X95, RC Set# DHGM240021 and final torque value was 540 N-m.

Manual Torque wrench was been used with Sr. No. XO2-578.

CB6 (Cat walk supports).

Bolt sizes used were M16X40, RC Set# DHGM160019 and final torque value was 200 N-m.

Bolt sizes used were M16X50, RC Set# DHGM160011 and final torque value was 200 N-m.

Manual Torque wrench was been used with Sr. No. XO2-118.

The attached photograph provides additional detail.

## WELDING INSPECTION REPORT

(Continued Page 3 of 3)

This QA notified ZPMC QC identified as Mr. Zhang Hai Jun and Mr.Omega are present during the inspection.

This QA Inspector Randomly observed the following work in progress:

SEGMENT: 6AW-6BW -Panel Point (PP) #40-41.

This QA Inspector observed ZPMC Personnel's performing bolt snug tightening for the U-Ribs to U-Ribs internal splice plate at Segment SEGMENT: 6AW-6BW – PP #40-41.

SEGMENT: 6BW-6CW-PP#43-44.

This QA Inspector observed ZPMC Personnel's performing bolt snug tightening for the U-Ribs to U-Ribs internal splice plate at SEGMENT: 6BW-6CW- PP#43-44.

LIFT:5 East/West (Traveler Rail brackets).

Signed off Green Tag's.

This QA Inspector signed off green tags. Green Tag numbers are as follows:

1.710,dated:03/25/2010.

2.711,dated:03/25/2010.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





# **Summary of Conversations:**

Only general conversation was held between QA and Quality Control (QC) concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Prabhu,Surendra	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer